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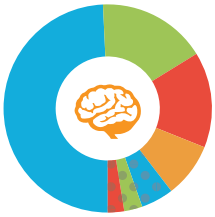
STEM Action Center: FY 2019 at a Glance

Unleashing Curiosity

424,678+
Student Experiences



- Math Personalized Learning
- Organization Grants
- Computing Partnerships
- Magic Show
- Innovation Incubators
- STEM Fest
- STEM Bus Program

Connecting Community

85+
Districts & Charters

250+
Community Partners

10+
Government Agencies

9+
Higher Education Partners

Building Capacity

8,537+
STEM Professional Learning Opportunities
For teachers, facilitators, and administrators statewide

Evaluating Innovation

210+
New Ideas Put into Action
Including a STEM Landscape Analysis

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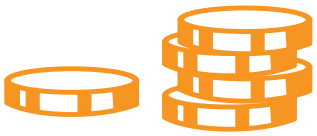
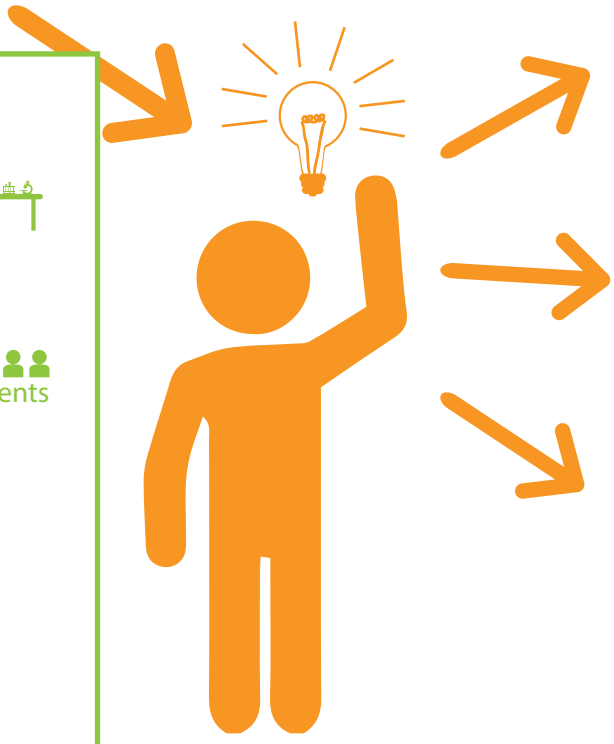
Innovation Incubators FY19 Report

For more information contact:
Sue Redington | sredington@utah.gov | 801-538-8697

Small dollar amounts



given directly to people with great ideas



can have huge impacts

Utah students won an international science competition at the world level

High school students learned about half life and the perils of hanging out in abandoned uranium mines

12-14 year old girls from rural Utah got to pilot real airplanes around Cache Valley

Quick Facts

283 Ideas Funded

93,502+ Students

283 Schools Impacted

63 Organizations Supported

Participating in two STEM competitions made students three times more likely to want a STEM job*

*International Journal of Science Education

Math Personalized Learning Grants FY19 Report

For more information contact:
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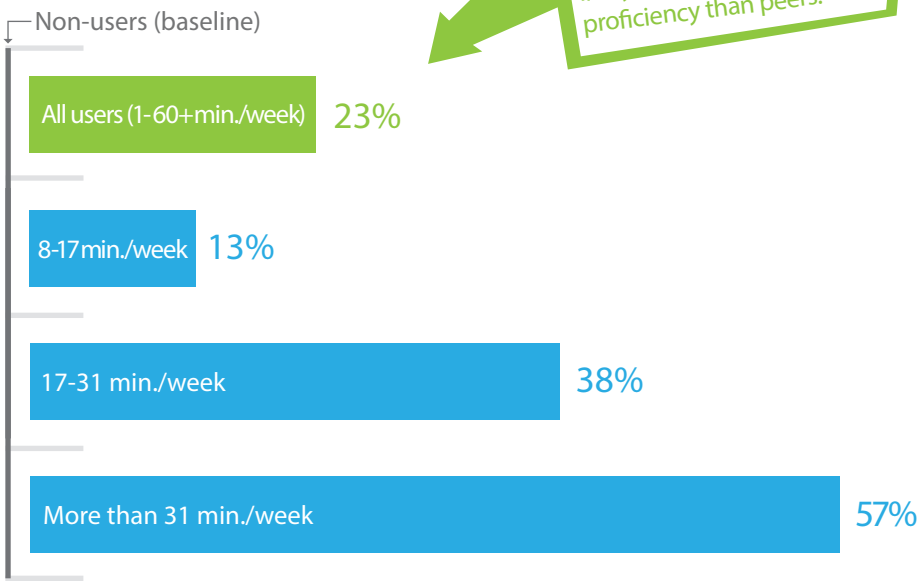
Overall, students who used the software were **23% more likely to be proficient in math** in SY18-19 than similar non-users.*



Programs assess students' understanding of math and provide personalized content, adaptively targeting knowledge gaps and providing immediate feedback.

Quick Facts

586 schools from 33 districts & 39 charters

134,807 Students

For $19/year per student math scores improved & teachers reported increased job satisfaction

21% of Utah Students have access to software

100% of purchased licenses were used

Teacher and Administrator Commitment and Support

- **81%** of teachers agreed the software **increased their instructional effectiveness.**
- **96%** of teachers agreed the software **helped students strengthen important skills.**
- **95%** of administrators agreed the software **had a positive impact on students' math performance.**
- **71%** of teachers agreed the math software **increased their satisfaction with their job.**

"This is the best program I have seen for teaching students to keep trying things and not give up when it is hard. I have seen an increase in their critical thinking skills"

The K-12 Mathematics Personalized Learning Software Grant provides funds to LEAs and schools through a competitive grant process to support the use of mathematics software that is individualized, self-adapting, engaging, and provides frequent feedback while addressing core standards in math. The Utah Education Policy Center at the University of Utah, in partnership with Utah Valley University School of Education, are serving as the external evaluators for the grant program.

Math Personalized Learning Software Facilitates Innovation

HOW?

Innovation from the Software

The software provided **new ways to solve math problems.**

- 92% of teachers agreed
- 75% of elementary students agreed
- 59% of secondary students agreed

The software **built student confidence in math.**

- 83% of teachers agreed
- 68% of elementary students agreed
- 52% of secondary students agreed

NEW WAYS TO SOLVE PROBLEMS + CONFIDENCE IN MATH

Over 90% of teachers and administrators were satisfied with the software and would recommend the software to others.

What Teachers Say They Appreciate

- Software is adaptive to the students' levels.
- Students can work at their own pace and track their own progress.
- The software complements in-class teaching.
- Programs support the Utah Core Standards.
- The software is engaging.
- The software facilitates mathematical thinking and problem solving.
- Language learners and low-literacy students benefit from the visual components.
- Data reports increase instructional effectiveness.
- Regular use is associated with academic gains.

90% of teachers felt the software was a good complement to classroom instruction

93% of teachers felt the program was well aligned to Utah Core Standards

*Variables held constant in the models included 2015-16 SAGE math scores, low income, race/ethnicity, gender, grade level, and school Title I status.

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Professional Learning Grants FY19 Report

For more information contact:
Kellie Yates | kellieyates@utah.gov | 801-538-8765

UTAH EDUCATION POLICY CENTER
THE UNIVERSITY OF UTAH

Percentage of teachers who reported positive impacts:

ability to target instruction using data

ability to engage equitably with students

STEM content knowledge

STUDENT OUTCOMES

Teachers reported increases in students' ability to:

- communicate
- collaborate
- think critically
- think creatively
- be self directed learners
- solve real world problems

QUICK FACTS

5,732 teacher and administrator participants

76 locally designed STEM professional learning plans

58 multi-year projects, showing long term commitment and teacher buy-in

Utah Department of Heritage & Arts

Utah STEM Action Center

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Computing Partnerships FY19 Report

For more information contact:
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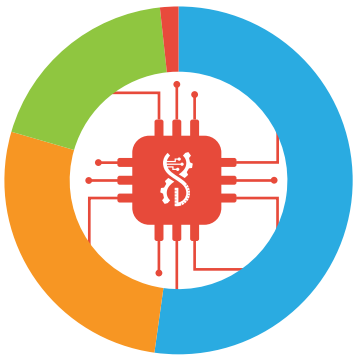
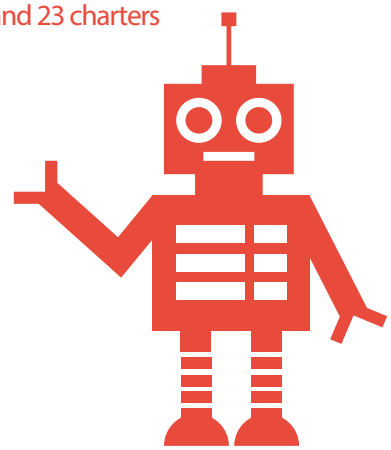


Number of students impacted:
- New Class Sections
- Outreach and Engagement
- Code.org
- Girls Who Code

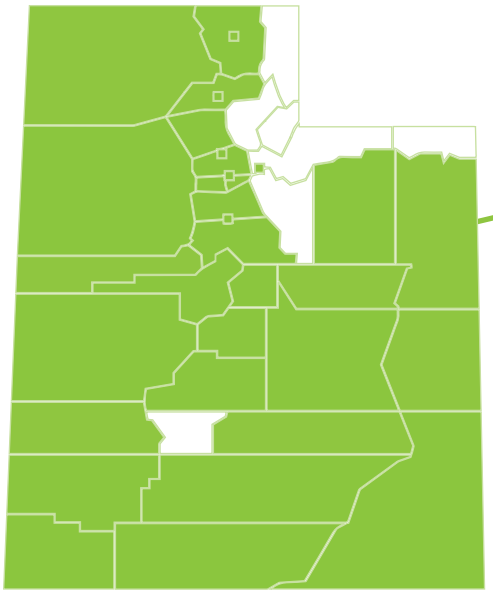
63,000+
Students Impacted
From 410 schools in 34 districts and 23 charters



30+
Innovative Ideas Funded
including 28 unique proposals from Utah teachers and administrators

340+
New Opportunities for Students
including more than 250 new class sections

Impacted Districts



47% off the Wasatch Front

2530 Teachers & Facilitators

"This has been a great way for us to evaluate computing curriculum using the out-of-school program. It is helping us to decide activities that should be included in our 6th grade course -- and those that are best as enrichment for the after school program."

- JoAnn Tuttle, Nebo School District

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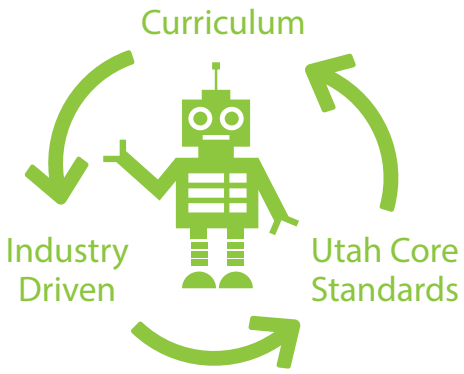
STEM in Motion FY19 Report

For more information contact:
Colleen Fisher | colleenfisher@utah.gov | 801-538-8691

About STEM in Motion

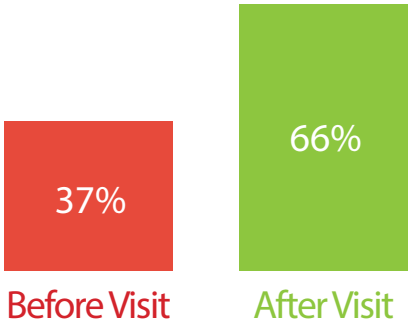
STEM in Motion is a traveling education program that visits schools and communities across Utah to provide hands-on learning and inspire the next generation of STEM leaders.

Curriculum



Student Impact

Percentage of students who reported liking STEM a great deal.



Quick Facts

10,780 students impacted

64 schools visited

20 school districts

449 programs taught

44,165 participants in public events

Equity & Access

of teachers said their visit introduced students to new material

Title I Schools

Schools in rural Utah

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Utah STEM Foundation FY19 Report

For more information contact:
Allison Spencer | aspencer@utah.gov | 801-520-5235

Supporting STEM in Utah

Since its inception in 2016, the Utah STEM Foundation has worked produce a STEM-competitive workforce by collaborating with community partners to create engagement and industry alignment and deliberately allocating valuable funds.

100% of funding recieved by the foundation is invested back into the community to support STEM in the state of Utah.

The Utah STEM Foundation Funding Priorities:

Workforce
Students will thrive in STEM and contribute to Utah's workforce

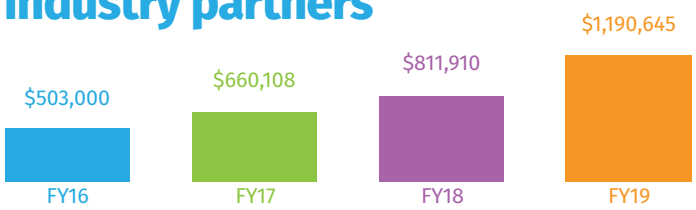
Innovation
We will use creativity and innovation to solve challenging problems

Girls
We will work to close the gender gap in STEM fields

Equity & Accesss

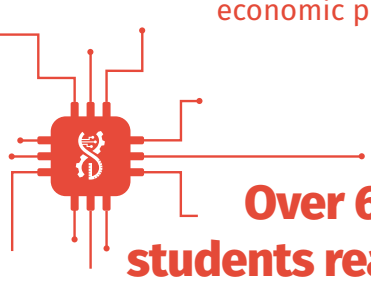
The Utah STEM Foundation by the Numbers

$1.2 million donated by 40+ industry partners



Each year our relationships and donations increase. We appreciate all of our STEM champions!

Industry contributions helped students become prepared to enter the STEM workforce and contribute to Utah's economic prosperity.



Over 67,000 students reached